

REMARKS

This Reply and Amendment is intended to be completely responsive to the Office Action dated May 19, 2004. Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 39-76 stand rejected. No claims have been amended, and no new matter has been added. Accordingly, Claims 39-76 will be pending in this Application.

A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claim Rejections – 35 U.S.C. § 103(a)

On page 2 of the Office Action, Claims 39-76 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,556,853 (“Cannone”) in view of U.S. Patent No. 5,858,575 (“Chen”). The Applicants respectfully traverse the rejection of Claims 39-76.

Cannone relates to a “grid for lead-acid cell” and shows a “generally circular grid structure” that includes “concentric circular structural members” that are “joined by radial structural members” and that have a “cross-section configuration” that is “essentially hexagonal” (Column 2, lines 44-47; Column 3, lines 21-23).

Chen relates to “hot dipped Pb-Ca grids for lead-acid batteries” and shows an “expanded battery grid” comprising “a plurality of grid wires 4” that are “interconnected by a plurality of nodes 6 to form a gridwork for supporting the electrodes active material” (Column 2, lines 56-59).

Claim 39 is in independent form and recites a “grid for a battery” including, in combination with other elements, “a plurality of wire elements” in which “at least one of the wire elements has a first transverse cross-section taken at a position intermediate the opposed ends of the wire element and a second transverse cross-section taken at one of the opposed ends of the wire element, the second transverse cross-section being generally rectangular and

the first transverse cross-section being non-rectangular.” Claims 40-53 depend from Claim 39.

Claim 54 (as amended) is in independent form and recites a “grid for a battery” including, in combination with other elements, “a plurality of wires having a plurality of surfaces, at least one of the wires having a substantially rectangular cross-section at a first location at an end of the wire and a non-rectangular cross-section at a second location.” Claims 55-64 depend from Claim 54.

Claim 65 is in independent form and recites a “grid for a battery” including, in combination with other elements, “a means for supporting an active material” that “includes at least one wire element having a generally rectangular cross-sectional shape at a first location at an end of the wire element and a non-rectangular cross-sectional shape at a second location.” Claims 66-76 depend from Claim 65.

In responding to the Applicants’ arguments presented in the Reply and Amendment dated February 12, 2004, the Examiner stated at page 4 of the Office Action:

Applicants note that in the Cannone reference “at the point at which member 11 intersects radial member 14, ...member 11 has an essentially hexagonal cross-section at the point of contact with radial member 14”. From Figure 1 of the Cannone patent, radial member 14 has a transverse rectangular cross section at the points between the concentric circular structural members 10, 11, 12, and 13. Element 14 is a “wire” since it meet the definition of a wire as a “slender metal rod” given by the Merriam-Webster Dictionary at www.m-w.com, a hexagonal cross section at the intersections of radial member 14 with any of elements 10, 11, 12, or 13, and has a rectangular cross sections at the points between any of elements 10 and 11, 11 and 12, or 12 and 13.

The “grid for a battery” recited in independent Claims 39, 54 (as amended), and 65 (as amended) would not have been obvious over Cannone in view of Chen under 35 U.S.C. § 103(a).

For example, Cannone, alone or in any proper combination with Chen, does not disclose, teach, or suggest a “wire element” that has a “first transverse cross-section taken at a

position intermediate the opposed ends of the wire element and a second transverse cross-section taken at one of the opposed ends of the wire element” such that the “second transverse cross-section” (at one of the opposed ends) is “generally rectangular” and the “first transverse cross-section” (intermediate the ends) is “non-rectangular,” as recited in Claims 39-53. In contrast, as noted by the Examiner, Cannone discloses a “radial member 14” that has “a hexagonal cross section at the intersections of radial member 14 with any of elements 10, 11, 12, or 13, and has a rectangular cross sections at the points between any of elements 10 and 11, 11 and 12, or 12 and 13” (emphasis added).

Further, Cannone, alone or in any proper combination with Chen, does not disclose, teach, or suggest a “plurality of wires having a plurality of surfaces, at least one of the wires having a substantially rectangular cross-section at a first location at an end of the wire and a non-rectangular cross-section at a second location,” as recited in Claims 54-64.

Still further, Cannone, alone or in any proper combination with Chen, does not disclose, teach, or suggest a “means for supporting an active material” that includes “at least one wire element having a generally rectangular cross-sectional shape at a first location at an end of the wire element and a non-rectangular cross-sectional shape at a second location,” as recited in Claims 65-76.

Accordingly, the combination of Cannone and Chen would not result in the subject matter recited in independent Claims 39, 54, and 65, or in corresponding dependent Claims 40-53, 55-64, and 66-76.

Furthermore, to transform the combination of Cannone and Chen to the “grid for a battery” recited in independent Claims 39, 54, and 65 (and corresponding dependent Claims 40-53, 55-64, and 66-76) would require still further modification, and such modification is taught only by the Applicants’ own disclosure.

The subject matter recited in Claims 39-76, considered as a whole, would not have been obvious to a person having ordinary skill in the art in view of the combination of Cannone and Chen. The rejection of Claims 39-76 over Cannone in view of Chen under 35

U.S.C. § 103(a) is improper. Therefore, Claims 39-76 are patentable over Cannone in view of Chen.

* * *

It is submitted that each outstanding objection and rejection to the Application has been overcome, and that the Application is in a condition for allowance. Claims 39-76 will be pending in this Application upon entry of this Reply and Amendment. The Applicants request reconsideration and allowance of all pending Claims 39-76.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1447. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1447. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 06-1447.

Respectfully submitted,

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